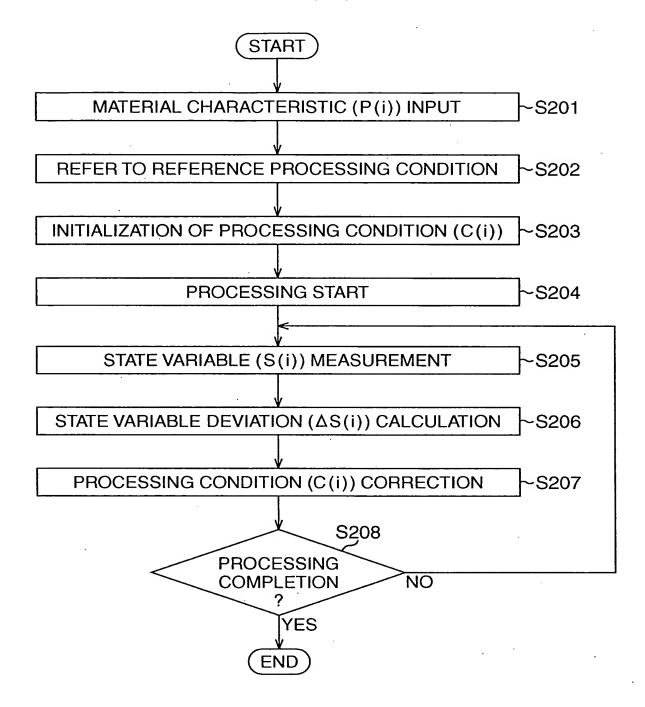


FIG. 2



		* -	* •	* •	* •
	Lubricant Film Thickness	0.5	0.4 0.6 0.8 1.0 0.4 0.6 0.4 -0.2 -0.4 -1.0 1.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	* *
	FRICTION COEFFICIENT	-0.5	-1.0	0.0	* -
,	SHEET YIELD TENSILE ELONGATION O R PLASTICITY HARDNESS TEMPERATURE ROUGHNESS COEFFICIENT THICKNESS TRENGTH STRENGTH STRENGTH STRENGTH FILM FILM	0.2 0.3 0.4 0.5 0.2 0.3 0.2 -0.1 -0.2 -0.5 0.5	4 .0–	0.0	* -
MATERIAL CHARACTERISTIC VALUE (P)	TEMPERATURE	-0.1	7.0-	0.0	* *
RISTIC	HARDNËSS	0.2	0.4	0.0	* * * *
ARACTE (P)	PLASTICITY COEFFICIENT	6.0	9.0	0.0	* *
IAL CH/	r VALUE	0.2	0.4	0.0	*.
MATER	n VALUE	9.0	1.0	0.0	* .
	ELONGATION	0.4	8'0	0.0	* •
	TENSILE STRENGTH	0.3	9.0	0.0	*.
	YIELD STRENGTH	0.2	0.4	0.0	* .
	SHEET THICKNESS S	0.2	0.4	0.0	* .
		FORMING SPEED	BLANK-HOLDING FORCE	METAL MOLD TEMPERATURE	:
			FORMING CONDITION	VALUE (CO)	

			:	* •	*.	* •	* * *
			MATERIAL Temperature	-0.5	-0.5	1.0	* *
			METAL MOLD METAL MOLD METAL MOLD DISPLACEMENT DISPLACEMENT	-0.2	-0.2	0.0	* .
·			DISPLACEMENT No.2	-0.2	-0.2	0.0	*.
. '	·	STATE VARIABLE (S)	DISPLACEMENT No.1	-0.2	-0.2	0.0	*.
4		STATE VA (S)	METAL MOLD DISTORTION No.3	-0.2	-0.2	0.0	*.
FIG. 4			METAL MOLD DISTORTION No.2	-0.2	-0.2	0.0	*
		·	METAL MOLD DISTORTION No.1	-0.2	-0.2	0.0	*
			,	-0.5	-0.5	-1.0	*.
·			PUNCH REACTION	-1.0	-1.0	0.0	* .
				FORMING SPEED	BLANK-HOLDING FORCE	METAL MOLD TEMPERATURE	
					CONDITION	AMOUNT (C)	

FIG. 5

	P(1) (SHEET THICKNESS /mm)	P(2) (YIELD STRENGTH /MPa)	P(3) (TENSILE STRENGTH /MPa)	P(4) (TOTAL ELONGATION /%)	P(5) (HARDNESS /Hv)
COIL TYPICAL MECHANICAL PROPERTIES	1.175 ~ 1.225	145	285	43	145
REFERENCE VALUE	1.200	140	280	42	140

FIG. 6

STANDARD PROCESSING CONDITION	VALUE
C0 (1) (FORMING SPEED)	50mm/sec.
C0 (2) (BLANK-HOLDING FORCE)	50kN

FIG. 7

	P(1) (SHEET THICKNESS)	P(2) (YIELD STRENGTH)	P(3) (TENSILE STRENGTH)	P(4) (TOTAL ELONGATION)	P(5) (HARDNESS)
C0 (1) (FORMING SPEED)	0.2	0.2	0.3	0.4	0.2
C0 (2) (BLANK— HOLDING FORCE)	0.4	0.4	0.6	0.8	0.4

	S(1)	S(2)	S(3)	S(4)
	PUNCH			METAL MOLD
	REACTION	REACTION	REACTION	TEMPERATURE
	10mm	20mm	30mm	(AT FORMING START)
REFERENCE VALUE	20kN	40KN	65kN	30,00

	S(1) PUNCH REACTION 10mm	S(2) PUNCH REACTION 20mm	S(3) PUNCH REACTION 30mm	S(4) METAL MOLD TEMPERATURE (AT FORMING START)
C(1) (FORMING SPEED)	-1.0	-1.0	-1.0	-0.5
C(2) (BLANK-HOLDING FORCE)	-1.0	-1.0	-1.0	-0.5

FIG. 10

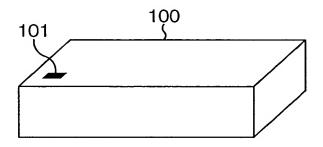


FIG. 11

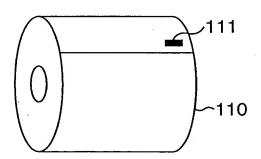


FIG. 12

